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# PREVENTION QUALITY INDICATORS™ v2019 ICD-10-CM Benchmark Data Tables

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## Contents

Introduction .....	1
Acknowledgments .....	2
Table 1. Prevention Quality Indicators for Overall Population .....	3
Table 2. PQI 01 – Diabetes Short-Term Complications Admission Rate, per 100,000 Population .....	4
Table 3. PQI 03 – Diabetes Long-Term Complications Admission Rate, per 100,000 Population .....	4
Table 4. PQI 05 – Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate, per 100,000 Population .....	4
Table 5. PQI 07 – Hypertension Admission Rate, per 100,000 Population .....	4
Table 6. PQI 08 – Heart Failure Admission Rate, per 100,000 Population .....	5
Table 7. PQI 11 – Bacterial Pneumonia Admission Rate, per 100,000 Population .....	5
Table 8. PQI 12 – Urinary Tract Infection Admission Rate, per 100,000 Population .....	5
Table 9. PQI 14 – Uncontrolled Diabetes Admission Rate, per 100,000 Population .....	6
Table 10. PQI 15 – Asthma in Younger Adults Admission Rate, per 100,000 Population .....	6
Table 11. PQI 16 – Lower-Extremity Amputation Among Patients With Diabetes Rate, per 100,000 Population .....	6
Table 12. PQI 90 – Prevention Quality Overall Composite <sup>a</sup> , per 100,000 Population .....	6
Table 13. PQI 91 – Prevention Quality Acute Composite <sup>a</sup> , per 100,000 Population .....	7
Table 14. PQI 92 – Prevention Quality Chronic Composite <sup>a</sup> , per 100,000 Population .....	7
Table 15. PQI 93 – Prevention Quality Diabetic Composite <sup>a</sup> , per 100,000 Population .....	7

## Introduction

The data presented in this document are nationwide comparative rates for Version 2019 of Agency for Healthcare Research and Quality (AHRQ) Quality Indicators™ (QI) Prevention Quality Indicators (PQI) software. The numerators, denominators and observed rates shown in this document are based on an analysis of discharge data from the 2016 AHRQ Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID).

HCUP is a family of healthcare databases and related software tools and products developed through a Federal-State-industry partnership<sup>2</sup>. HCUP includes the largest collection of longitudinal hospital care data in the United States, with all-payer, encounter-level information beginning in 1988. The SID contains all-payer, encounter-level information on inpatient discharges, including clinical and resource information typically found on a billing record, such as patient demographics, up to 30 *International Classification of Diseases, Tenth Revision, Clinical Modification/Procedural Classification System (ICD-10-CMS/PCS)* diagnoses and procedures, length of stay, expected payer, admission and discharge dates, and discharge disposition. In 2016, the HCUP databases represented more than 97 percent of all annual discharges in the United States.

The analytic dataset used to generate the tables in this document consists of the same hospital discharge records that comprise the reference population for Version 2019 of the AHRQ QI software. This reference population file was limited to community hospitals and also excludes rehabilitation and long-term acute care (LTAC) hospitals. Information on the type of hospital was obtained by the American Hospital Association (AHA) Annual Survey of Hospitals. AHA defines community hospitals as “all non-Federal, short-term, general, and other specialty hospitals, excluding hospital units of institutions.” Included among community hospitals are specialty hospitals such as obstetrics-gynecology, ear-nose-throat, orthopedic, and pediatric institutions. Also included are public hospitals and academic medical centers.

The 2016 HCUP SID includes information on all inpatient discharges from hospitals in participating States. Discharges from all 48 participating States are used to develop area-level indicators.<sup>1</sup>

Additional information on the reference population and the risk adjustment process may be found in Quality Indicator Empirical Methods, available on the AHRQ QI™ website.  
(<http://www.qualityindicators.ahrq.gov/modules/Default.aspx>)

The QI observed rates for area-level indicators are per 100,000 population. Cell sizes less than 11 are suppressed due to confidentiality; and are designated by an asterisk (\*). When only one data point in a series must be suppressed due to cell sizes, another data point is provided as a range to disallow calculation of the masked variable. In some cases, numerators, denominators or rates are not applicable for the category due to the exclusion criteria in the specification of the indicator, and are designated by dashes (--).

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<sup>1</sup> States in the 2016 reference population for the area-level indicators include: AK, AR, AZ, CA, CO, CT, DE, DC, FL, GA, HI, IA, IL, IN, KS, KY, LA, MA, MD, ME, MI, MN, MO, MS, MT, NC, ND, NE, NJ, NM, NV, NY, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, and WY.

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**Table 1. Prevention Quality Indicators for Overall Population**

INDICATOR	LABEL	NUMERATOR	DENOMINATOR*	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
PQI 1	Diabetes Short-Term Complications Admission Rate, per 100,000 Population	118,679	249,421,620	47.58
PQI 3	Diabetes Long-Term Complications Admission Rate, per 100,000 Population	193,247	249,421,869	77.48
PQI 5	Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate, per 100,000 Population	632,223	153,071,314	413.03
PQI 7	Hypertension Admission Rate, per 100,000 Population	115,700	249,421,830	46.39
PQI 8	Heart Failure Admission Rate, per 100,000 Population	910,767	249,432,055	365.14
PQI 11	Bacterial Pneumonia Admission Rate, per 100,000 Population	501,763	249,427,941	201.17
PQI 12	Urinary Tract Infection Admission Rate, per 100,000 Population	353,702	249,424,993	141.81
PQI 14	Uncontrolled Diabetes Admission Rate, per 100,000 Population	103,769	249,421,711	41.6
PQI 15	Asthma in Younger Adults Admission Rate, per 100,000 Population	29,499	96,354,308	30.62
PQI 16	Lower - Extremity Amputation Among Patients With Diabetes Rate, per 100,000 Population	60,765	249,421,680	24.36
PQI 90	Prevention Quality Overall Composite, per 100,000 Population	2,994,619	249,471,377	1200.39
PQI 91	Prevention Quality Acute Composite, per 100,000 Population	855,465	249,433,918	342.96
PQI 92	Prevention Quality Chronic Composite, per 100,000 Population	2,139,191	249,447,842	857.57
PQI 93	Prevention Quality Diabetes Composite, per 100,000 Population	451,245	249,422,339	180.92

\*Rate computed among persons with diabetes

**Table 2. PQI 01 – Diabetes Short-Term Complications Admission Rate, per 100,000 Population**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	118,679	249,421,620	47.58
Females	59,439	127,952,242	46.45
Males	59,240	121,469,378	48.77
18 to 39 years	72,073	96,354,317	74.8
40 to 64 years	36,316	103,843,321	34.97
65 to 74 years	6,183	28,609,978	21.61
75+ years	4,107	20,614,004	19.92

**Table 3. PQI 03 – Diabetes Long-Term Complications Admission Rate, per 100,000 Population**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	193,247	249,421,869	77.48
Females	73,695	127,952,318	57.6
Males	119,552	121,469,551	98.42
18 to 39 years	21,474	96,354,304	22.29
40 to 64 years	108,016	103,843,409	104.02
65 to 74 years	38,115	28,610,036	133.22
75+ years	25,642	20,614,120	124.39

**Table 4. PQI 05 – Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate, per 100,000 Population**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	632,223	153,071,314	413.03
Females	378,191	80,451,854	470.08
Males	254,032	72,619,460	349.81
40 to 64 years	268,954	103,843,765	259
65 to 74 years	176,506	28,611,077	616.91
75+ years	186,763	20,616,472	905.89

**Table 5. PQI 07 – Hypertension Admission Rate, per 100,000 Population**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	115,700	249,421,830	46.39
Females	66,216	127,952,380	51.75

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE×100,000)
Males	49,484	121,469,450	40.74
18 to 39 years	10,998	96,354,297	11.41
40 to 64 years	51,610	103,843,330	49.7
65 to 74 years	20,974	28,610,004	73.31
75+ years	32,118	20,614,199	155.81

**Table 6. PQI 08 – Heart Failure Admission Rate, per 100,000 Population**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE×100,000)
Overall	910,767	249,432,055	365.14
Females	444,201	127,957,433	347.15
Males	466,566	121,474,622	384.09
18 to 39 years	22,645	96,354,307	23.5
40 to 64 years	244,118	103,843,693	235.08
65 to 74 years	202,224	28,611,230	706.8
75+ years	441,780	20,622,825	2142.19

**Table 7. PQI 11 – Bacterial Pneumonia Admission Rate, per 100,000 Population**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE×100,000)
Overall	501,763	249,427,941	201.17
Females	271,443	127,955,463	212.14
Males	230,320	121,472,478	189.61
18 to 39 years	33,648	96,354,316	34.92
40 to 64 years	144,180	103,843,677	138.84
65 to 74 years	104,946	28,610,806	366.81
75+ years	218,989	20,619,142	1062.07

**Table 8. PQI 12 – Urinary Tract Infection Admission Rate, per 100,000 Population**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE×100,000)
Overall	353,702	249,424,993	141.81
Females	260,249	127,954,853	203.39
Males	93,453	121,470,140	76.93
18 to 39 years	33,873	96,354,308	35.15
40 to 64 years	69,053	103,843,373	66.5
65 to 74 years	61,398	28,610,184	214.6
75+ years	189,378	20,617,128	918.55

**Table 9. PQI 14 – Uncontrolled Diabetes Admission Rate, per 100,000 Population**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	103,769	249,421,711	41.6
Females	51,419	127,952,272	40.19
Males	52,350	121,469,439	43.1
18 to 39 years	13,711	96,354,299	14.23
40 to 64 years	44,260	103,843,332	42.62
65 to 74 years	21,234	28,609,990	74.22
75+ years	24,564	20,614,090	119.16

**Table 10. PQI 15 – Asthma in Younger Adults Admission Rate, per 100,000 Population**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	29,499	96,354,308	30.62
Females	19,678	47,502,628	41.43
Males	9,821	48,851,680	20.1
18 to 39 years	29,499	96,354,308	30.62

**Table 11. PQI 16 – Lower-Extremity Amputation Among Patients With Diabetes Rate, per 100,000 Population**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	60,765	249,421,680	24.36
Females	17,916	127,952,238	14
Males	42,849	121,469,442	35.28
18 to 39 years	2,317	96,354,297	2.4
40 to 64 years	32,924	103,843,340	31.71
65 to 74 years	15,186	28,609,999	53.08
75+ years	10,338	20,614,044	50.15

**Table 12. PQI 90 – Prevention Quality Overall Composite<sup>a</sup>, per 100,000 Population**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	2,994,619	249,471,377	1200.39
Females	1,635,345	127,979,991	1277.81
Males	1,359,274	121,491,386	1118.82
18 to 39 years	239,254	96,354,417	248.31
40 to 64 years	985,481	103,849,814	948.95



GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
65 to 74 years	640,431	28,620,784	2237.64
75+ years	1,129,453	20,646,362	5470.47

<sup>a</sup> Composite includes PQI 1, 3, 5, 7, 8, 10, 11, 12, 14, 15 and 16

**Table 13. PQI 91 – Prevention Quality Acute Composite<sup>a</sup>, per 100,000 Population**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	855,465	249,433,918	342.96
Females	531,692	127,959,831	415.51
Males	323,773	121,474,087	266.54
18 to 39 years	67,521	96,354,329	70.08
40 to 64 years	213,233	103,843,850	205.34
65 to 74 years	166,344	28,611,460	581.39
75+ years	408,367	20,624,279	1980.03

<sup>a</sup> Composite includes PQI 10, 11 and 12

**Table 14. PQI 92 – Prevention Quality Chronic Composite<sup>a</sup>, per 100,000 Population**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	2,139,191	249,447,842	857.57
Females	1,103,668	127,965,777	862.47
Males	1,035,523	121,482,065	852.41
18 to 39 years	171,734	96,354,361	178.23
40 to 64 years	772,259	103,846,859	743.65
65 to 74 years	474,101	28,615,961	1656.77
75+ years	721,097	20,630,661	3495.27

<sup>a</sup> Composite includes PQI 1, 3, 5, 7, 8, 14, 15 and 16

**Table 15. PQI 93 – Prevention Quality Diabetic Composite<sup>a</sup>, per 100,000 Population**

GROUP	NUMERATOR	DENOMINATOR	OBSERVED RATE PER 100,000 (=OBSERVED RATE*100,000)
Overall	451,245	249,422,339	180.92
Females	195,463	127,952,499	152.76
Males	255,782	121,469,840	210.57
18 to 39 years	108,596	96,354,333	112.7
40 to 64 years	207,678	103,843,521	199.99
65 to 74 years	74,482	28,610,121	260.33
75+ years	60,489	20,614,364	293.43

<sup>a</sup> Composite includes PQI 1, 3, 14 and 16